

# **EXHIBIT BT**

**Sonos's Claim Chart**  
**U.S. Patent No. 9,648,071**

Claim: 1	Google's Cloud Platform
A method comprising:	<p>Google's line of Chromecast-enabled audio players includes, <i>inter alia</i>, the Google Home Mini, the Google Home, the Google Home Max, the Google Home Hub, and the Chromecast dongles, and these Chromecast-enabled audio players are controlled by smartphones, tablets, and computers installed with the Google Home app, the Google Play Music app, and/or other Chromecast-enabled apps (where a computing device installed with at least one of these apps is referred to herein as a "Chromecast-enabled computing device"). Each of the foregoing Chromecast-enabled audio players comprises a "playback device" as recited in claim 1, and a Chromecast-enabled playback system including one or more Chromecast-enabled audio players and one or more Chromecast-enabled computing devices on the same LAN comprises a "media playback system" as recited in claim 1, and Google's Cloud Platform comprises a "computing system" as recited in claim 1. <i>See, e.g.</i>, <a href="https://developers.google.com/cast/docs/caf_receiver/">https://developers.google.com/cast/docs/caf_receiver/</a>; <a href="https://developers.google.com/cast/docs/caf_receiver/queuing">https://developers.google.com/cast/docs/caf_receiver/queuing</a>; <a href="https://developers.google.com/cast/docs/reference/caf_receiver/cast.framework.QueueBase">https://developers.google.com/cast/docs/reference/caf_receiver/cast.framework.QueueBase</a>.</p>
<p>receiving, via a computing system from a media playback system over a network interface, a request to initiate playback of a particular cloud queue at a first media item, wherein the particular cloud queue is accessible to the media playback system over a wide area network; wherein media items of the particular cloud queue are playable by one or more playback devices of the media playback system;</p>	<p>Google's Cloud Platform is configured to receive, from a Chromecast-enabled playback system over a network interface, a request to initiate playback of a particular cloud queue at a first media item, where the particular cloud queue is accessible to the Chromecast-enabled playback system over a wide area network and the media items of the particular cloud queue are playable by one or more Chromecast-enabled audio players in the Chromecast-enabled playback system.</p> <p>For instance, Google's Cloud Platform is configured to maintain a given cloud queue of audio tracks that is accessible to a given Chromecast-enabled playback system via the Internet, and Google's Cloud Platform is further configured to receive a request from the given Chromecast-enabled playback system to initiate playback of the given cloud queue by one or more Chromecast-enabled audio players in the given Chromecast-enabled playback system. <i>See, e.g.</i>, <a href="https://developers.google.com/cast/docs/caf_receiver/">https://developers.google.com/cast/docs/caf_receiver/</a>; <a href="https://developers.google.com/cast/docs/caf_receiver/queuing">https://developers.google.com/cast/docs/caf_receiver/queuing</a>; <a href="https://developers.google.com/cast/docs/reference/caf_receiver/cast.framework.QueueBase">https://developers.google.com/cast/docs/reference/caf_receiver/cast.framework.QueueBase</a>; <a href="https://developers.google.com/cast/docs/reference/caf_receiver/cast.framework.QueueManager">https://developers.google.com/cast/docs/reference/caf_receiver/cast.framework.QueueManager</a>; <a href="https://developers.google.com/cast/docs/reference/caf_receiver/cast.framework.messages.QueueItem">https://developers.google.com/cast/docs/reference/caf_receiver/cast.framework.messages.QueueItem</a>; <a href="https://developers.google.com/cast/docs/reference/caf_receiver/cast.framework.messages.QueueData">https://developers.google.com/cast/docs/reference/caf_receiver/cast.framework.messages.QueueData</a>; <a href="https://developers.google.com/cast/docs/reference/caf_receiver/cast.framework.messages.QueueLoadRequestData">https://developers.google.com/cast/docs/reference/caf_receiver/cast.framework.messages.QueueLoadRequestData</a>; <a href="https://developers.google.com/cast/docs/android_sender/queuing">https://developers.google.com/cast/docs/android_sender/queuing</a>; <a href="https://developers.google.com/cast/docs/ios_sender/queuing">https://developers.google.com/cast/docs/ios_sender/queuing</a>.</p>
<p>assigning, via the computing system, a playhead pointer to a position within the</p>	<p>Google's Cloud Platform is configured to assign a playhead pointer to a position within the particular cloud queue that corresponds to the first media item.</p>

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particular cloud queue that corresponds to the first media item;	<p>For instance, Google's Cloud Platform is configured to maintain a position of a playhead pointer within a cloud queue of audio tracks that is accessible to a given Chromecast-enabled playback system via the Internet, where this position corresponds to a given audio track in the cloud queue (e.g., the "current" track in the queue). <i>See, e.g.,</i> <a href="https://developers.google.com/cast/docs/caf_receiver/">https://developers.google.com/cast/docs/caf_receiver/</a>; <a href="https://developers.google.com/cast/docs/caf_receiver/queueing">https://developers.google.com/cast/docs/caf_receiver/queueing</a>; <a href="https://developers.google.com/cast/docs/reference/caf_receiver/cast.framework.QueueBase">https://developers.google.com/cast/docs/reference/caf_receiver/cast.framework.QueueBase</a>; <a href="https://developers.google.com/cast/docs/reference/caf_receiver/cast.framework.QueueManager">https://developers.google.com/cast/docs/reference/caf_receiver/cast.framework.QueueManager</a>; <a href="https://developers.google.com/cast/docs/reference/caf_receiver/cast.framework.messages.QueueItem">https://developers.google.com/cast/docs/reference/caf_receiver/cast.framework.messages.QueueItem</a>; <a href="https://developers.google.com/cast/docs/reference/caf_receiver/cast.framework.messages.QueueData">https://developers.google.com/cast/docs/reference/caf_receiver/cast.framework.messages.QueueData</a>; <a href="https://developers.google.com/cast/docs/reference/caf_receiver/cast.framework.messages.QueueLoadRequestData">https://developers.google.com/cast/docs/reference/caf_receiver/cast.framework.messages.QueueLoadRequestData</a>; <a href="https://developers.google.com/cast/docs/android_sender/queueing">https://developers.google.com/cast/docs/android_sender/queueing</a>; <a href="https://developers.google.com/cast/docs/ios_sender/queueing">https://developers.google.com/cast/docs/ios_sender/queueing</a>.</p>
transmitting, via the computing system to the media playback system over the network interface, an instruction that causes the one or more playback devices of the media playback system to initiate playback of the particular cloud queue at the first media item;	<p>Google's Cloud Platform is configured to transmit an instruction to the Chromecast-enabled playback system that causes one or more Chromecast-enabled audio players in the Chromecast-enabled playback system to initiate playback of the particular cloud queue at the first media item.</p> <p>For instance, Google's Cloud Platform is configured such that, in response to receiving a request to initiate playback of a given cloud queue by one or more Chromecast-enabled audio players in the Chromecast-enabled playback system, Google's Cloud Platform transmits an instruction to the Chromecast-enabled playback system that causes the one or more Chromecast-enabled audio players to initiate playback of the given cloud queue starting with a first audio track identified in the cloud queue. <i>See, e.g.,</i> <a href="https://developers.google.com/cast/docs/caf_receiver/">https://developers.google.com/cast/docs/caf_receiver/</a>; <a href="https://developers.google.com/cast/docs/caf_receiver/queueing">https://developers.google.com/cast/docs/caf_receiver/queueing</a>; <a href="https://developers.google.com/cast/docs/reference/caf_receiver/cast.framework.QueueBase">https://developers.google.com/cast/docs/reference/caf_receiver/cast.framework.QueueBase</a>; <a href="https://developers.google.com/cast/docs/reference/caf_receiver/cast.framework.QueueManager">https://developers.google.com/cast/docs/reference/caf_receiver/cast.framework.QueueManager</a>; <a href="https://developers.google.com/cast/docs/reference/caf_receiver/cast.framework.messages.QueueItem">https://developers.google.com/cast/docs/reference/caf_receiver/cast.framework.messages.QueueItem</a>; <a href="https://developers.google.com/cast/docs/reference/caf_receiver/cast.framework.messages.QueueData">https://developers.google.com/cast/docs/reference/caf_receiver/cast.framework.messages.QueueData</a>; <a href="https://developers.google.com/cast/docs/reference/caf_receiver/cast.framework.messages.QueueLoadRequestData">https://developers.google.com/cast/docs/reference/caf_receiver/cast.framework.messages.QueueLoadRequestData</a>; <a href="https://developers.google.com/cast/docs/android_sender/queueing">https://developers.google.com/cast/docs/android_sender/queueing</a>; <a href="https://developers.google.com/cast/docs/ios_sender/queueing">https://developers.google.com/cast/docs/ios_sender/queueing</a>.</p>
receiving, via the computing system over the network interface, an indication that a local playhead pointer of the media playback system is assigned to a position that	<p>Google's Cloud Platform is configured to receive an indication that a local playhead pointer of the Chromecast-enabled playback system is assigned to a position that corresponds to a second media item.</p> <p>For instance, Google's Cloud Platform is configured to receive a message from a Chromecast-enabled playback system indicating that the current audio track being played by the one or more Chromecast-enabled audio players of the Chromecast-enabled playback system has changed from the first audio</p>

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<p>corresponds to a second media item; and</p>	<p>track identified in the cloud queue to a second audio track identified in the cloud queue. <i>See, e.g.,</i> <a href="https://developers.google.com/cast/docs/caf_receiver/">https://developers.google.com/cast/docs/caf_receiver/</a>; <a href="https://developers.google.com/cast/docs/caf_receiver/queueing">https://developers.google.com/cast/docs/caf_receiver/queueing</a>; <a href="https://developers.google.com/cast/docs/reference/caf_receiver/cast.framework.QueueBase">https://developers.google.com/cast/docs/reference/caf_receiver/cast.framework.QueueBase</a>; <a href="https://developers.google.com/cast/docs/reference/caf_receiver/cast.framework.QueueManager">https://developers.google.com/cast/docs/reference/caf_receiver/cast.framework.QueueManager</a>; <a href="https://developers.google.com/cast/docs/reference/caf_receiver/cast.framework.messages.QueueItem">https://developers.google.com/cast/docs/reference/caf_receiver/cast.framework.messages.QueueItem</a>; <a href="https://developers.google.com/cast/docs/reference/caf_receiver/cast.framework.messages.QueueData">https://developers.google.com/cast/docs/reference/caf_receiver/cast.framework.messages.QueueData</a>; <a href="https://developers.google.com/cast/docs/reference/caf_receiver/cast.framework.messages.QueueLoadRequestData">https://developers.google.com/cast/docs/reference/caf_receiver/cast.framework.messages.QueueLoadRequestData</a>; <a href="https://developers.google.com/cast/docs/android_sender/queueing">https://developers.google.com/cast/docs/android_sender/queueing</a>; <a href="https://developers.google.com/cast/docs/ios_sender/queueing">https://developers.google.com/cast/docs/ios_sender/queueing</a>.</p>
<p>updating, via the computing system, the assigned position of the playhead pointer to indicate the position with the particular cloud queue that corresponds to the second media item.</p>	<p>Google's Cloud Platform is configured to update the assigned position of the playhead pointer to indicate the position with the particular cloud queue that corresponds to the second media item.</p> <p>For instance, Google's Cloud Platform is configured such that, in response to receiving a message from a Chromecast-enabled playback system indicating that the current audio track being played by the one or more Chromecast-enabled audio players of the Chromecast-enabled playback system has changed from the first audio track identified in the cloud queue to a second audio track identified in the cloud queue, Google's Cloud Platform updates the position of its maintained playhead pointer for the cloud queue such that it corresponds to the second audio track. <i>See, e.g.,</i> <a href="https://developers.google.com/cast/docs/caf_receiver/">https://developers.google.com/cast/docs/caf_receiver/</a>; <a href="https://developers.google.com/cast/docs/caf_receiver/queueing">https://developers.google.com/cast/docs/caf_receiver/queueing</a>; <a href="https://developers.google.com/cast/docs/reference/caf_receiver/cast.framework.QueueBase">https://developers.google.com/cast/docs/reference/caf_receiver/cast.framework.QueueBase</a>; <a href="https://developers.google.com/cast/docs/reference/caf_receiver/cast.framework.QueueManager">https://developers.google.com/cast/docs/reference/caf_receiver/cast.framework.QueueManager</a>; <a href="https://developers.google.com/cast/docs/reference/caf_receiver/cast.framework.messages.QueueItem">https://developers.google.com/cast/docs/reference/caf_receiver/cast.framework.messages.QueueItem</a>; <a href="https://developers.google.com/cast/docs/reference/caf_receiver/cast.framework.messages.QueueData">https://developers.google.com/cast/docs/reference/caf_receiver/cast.framework.messages.QueueData</a>; <a href="https://developers.google.com/cast/docs/reference/caf_receiver/cast.framework.messages.QueueLoadRequestData">https://developers.google.com/cast/docs/reference/caf_receiver/cast.framework.messages.QueueLoadRequestData</a>; <a href="https://developers.google.com/cast/docs/android_sender/queueing">https://developers.google.com/cast/docs/android_sender/queueing</a>; <a href="https://developers.google.com/cast/docs/ios_sender/queueing">https://developers.google.com/cast/docs/ios_sender/queueing</a>.</p>